

situation in which the external object **120** is touching the sensor surface in a location in which the symbol **111** is being displayed.

**[0046]** In a user interface according to an embodiment of the invention the processor unit **105** is capable of controlling the electronic device to execute a function related to the symbol **111** as a response to a situation in which the strength of the force directed to the sensor surface exceeds a pre-determined limit value and the force is directed to the sensor surface in the location in which the symbol is being displayed.

**[0047]** In a user interface according to an embodiment of the invention the processor unit **105** is arranged to change the symbol **111** displayed on the sensor surface from a non-selected state to a selected-to-move state and to move a position of the symbol on the sensor surface **102** as a response to a situation in which the external object **120** is touching the sensor surface in a location in which the symbol is being displayed and the external object is being moved on the sensor surface. The symbol is moved along with the external object. After moving, the symbol can be returned back to the non-selected state as a response to e.g. a situation in which the sensor surface is no more pressed.

**[0048]** In a user interface according to an embodiment of the invention the force sensor equipment comprises an acceleration sensor. The processor unit **105** is arranged to perform a control action, for example to change the symbol from the selected-to-move state to the non-selected state, as a response to a situation in which the acceleration is detected to exceed a pre-determined limit e.g. when the electronic device is shaken.

**[0049]** In a user interface according to an embodiment of the invention the processor unit **105** is arranged to modify visual information shown on the sensor surface **102** as a response to a situation in which the force directed to the sensor surface exceeds a pre-determined limit. The modification of the visual information can be used as a feedback from the electronic device to the user, said feedback indicating that the device has received a control action from the user.

**[0050]** A user interface according to an embodiment of the invention comprises a vibration generator **107** that is arranged to produce mechanical vibration. The processor unit **105** is arranged to activate the vibration generator to produce mechanical vibration as a response to a situation in which the force directed to the sensor surface exceeds a pre-determined limit. The mechanical vibration can be used as a feedback from the electronic device to the user, said feedback indicating that the device has received a control action from the user.

**[0051]** In a user interface according to an embodiment of the invention the processor unit **105** is arranged to modify visual information shown on the sensor surface **102** as a response to a situation in which the force directed to the sensor surface exceeds a first pre-determined limit and to activate the vibration generator **107** to produce mechanical vibration as a response to a situation in which the force directed to the sensor surface exceeds a second pre-determined limit. The user of the electronic device can get different feedbacks corresponding to different levels of the force.

**[0052]** FIG. **2a** shows an electronic device **200** comprising a user interface according to an embodiment of the invention. FIG. **2b** shows the A-A section view of the electronic device. The user interface of the electronic device comprises a sensor element **201** that has a sensor surface **202**. The sensor element is arranged to form a location indicator that is adapted to indicate a location of a spot of the sensor surface that is closest

to an external object **220**. The location indicator can express, for example, x- and y-coordinates of the spot closest to the external object. The sensor surface can be a touch sensitive sensor surface, a capacitive sensor surface, or a combined capacitive and touch sensitive sensor surface. The user interface comprises a force sensor equipment arranged to form a first force indicator that is adapted to indicate strength of a force directed to the sensor surface and a second (another) force indicator arranged to indicate a temporal change of a force directed to another surface of the electronic device than the sensor surface **202**. The force sensor equipment comprises a force sensor **203** that is arranged to detect the force directed to the sensor surface, and a force sensor **233** that is arranged to detect a temporal change of the force directed to the other surface **208** of the electronic device. In the embodiment of the invention shown in FIGS. **2a** and **2b**, the above-mentioned other surface of the electronic device is the surface on the opposite side of the electronic device with respect to the sensor surface. The other surface could as well be a side surface **206** of the electronic device or a butt-end surface **206'** of the electronic device. The user interface comprises a processor unit **205** that is capable of controlling the electronic device on the basis of the location indicator, the first force indicator, and the second force indicator. The user interface comprises a display screen **231** with the aid of which visual information can be shown.

**[0053]** In a user interface according to an embodiment of the invention the sensor surface **202** is a capacitive sensor surface and the processor unit **205** is arranged to move a cursor **213** on the display screen as a response to a situation in which a distance between the external object **220** and the sensor surface is less than a pre-determined limit value and the external object is moved in the xy-plane. The cursor is moved on the display screen according to movements of the external object in the xy-plane. The processor unit **205** is arranged to highlight a symbol **211** displayed on the display screen as a response to a situation in which the external object **220** touches the sensor surface and the cursor **213** is pointing to the symbol. In other words, a symbol pointed to by the cursor can be selected for further actions by touching the sensor screen. The processor unit **205** is arranged to move the symbol **211** on the display screen as a response to a situation in which the external object touches the sensor surface, the cursor **213** is pointing to the symbol, and the external object is moved on the sensor surface. The processor unit **205** is capable of controlling the electronic device to execute a function related to the symbol **211** as a response to a situation in which the strength of the force directed to the sensor surface exceeds a pre-determined limit value (e.g. 0.3 N) and the cursor **213** is pointing to the symbol.

**[0054]** In a user interface according to an embodiment of the invention the sensor surface **202** is a touch sensitive sensor surface and the processor unit **205** is arranged to move a cursor **213** on the display screen as a response to a situation in which the external object **220** touches the sensor surface and the external object is moved on the sensor surface. The cursor is moved on the display screen according to movements of the external object on the sensor surface. The processor unit **205** is arranged to highlight a symbol **211** displayed on the display screen as a response to a situation in which the strength of the force directed to the sensor surface exceeds a first pre-determined limit value (e.g. 0.3 N) and the cursor **213** is pointing to the symbol. In other words, a symbol pointed to by the cursor can be selected for further actions by pressing the